

Institution of Engineers Australia (NSW Division)  
Engineering Heritage Committee  
ORAL HISTORY PROGRAM

INTERVIEWEE: **Ross Gordon**  
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INTERVIEWER: Frank Heimans  
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INTERVIEW TAPE LOG

Tape: IEA SYD: FH55 Side A

TAPE COUNTER	SUBJECT	NAMES & KEYWORDS
008	Was born in Allison, near Dungog. DOB 12/10/15. His father was a schoolteacher at a small school who came out from Scotland in 1906 and had an MA in teaching from Aberdeen. Notes that his father came out here for health reasons.	Allison Dungog Scotland migrant 1906 Aberdeen

013	Cannot recall anything about Dungog but recalls that his primary education was from his father. It started at Demigo (?) when he was 6, at Fairy Meadow when he was 10. Secondary education was at Wollongong for 2 years then at Canterbury Boys High School. Passed the leaving certificate in 1933.	Dungog Demigo (?) Fairy Meadow Wollongong Canterbury Boys High Leaving Certificate
019	Recalls first memories at Bendemeer where his father was headmaster. Remembers the soldiers coming home from World War I in 1919. Recalls them arriving in cars. Gives details of the soldiers he saw.	Bendemeer World War I
027	Explains the family's movements from Bendemeer, then to Fairy Meadow.	Bendemeer Fairy Meadow
029	Describes his father as a very fine man and explains his influence. His father died in 1957 when he was in 4th year high school. Describes the effect this had on him. Explains that his father suffered from typhoid contracted in Scotland.	father 1957 typhoid
044	Primary school education began at Nemingha and at Fairy Meadow. Has little recollection of these but his father was headmaster of both schools and taught many of his classes.	primary education Nemingha Fairy Meadow
054	Went to Wollongong High School but missed the first year due to being hospitalised with a burst appendix. Describes academic record. Moved to Canterbury High School in 3rd year and describes this move. Because of the death of his father he did not do well at school and so went back to repeat. Explains that his mother found an advertisement for trainee engineers at the NSW Railways. Explains the process for exams and interviews. Began as a trainee in the NSW Railways in 1934.	High School Education Wollongong Canterbury High leaving certificate NSW Railways trainee engineer 1934

073	Explains why he repeated 5th year. Describes the effect the Depression had on his family and how they survived.	Depression finances family
082	Agrees that neighbours helped people out but notes that their family never asked for help.	assistance
086	Explains that his father was a Presbyterian and recalls going to the church with him to hear the bagpipes. His mother was a Catholic and his sister went to a Dominican school. When his father died she became a Catholic and tried to convert them all. Explains his attitude to religion.	religion Presbyterian Catholic Dominican
098	Explains that he originally wanted to study medicine but after the death of his father there was no money for him to go to university. Explains that he had two brothers with scholarships at the time and describes their careers. Relates his mother's comments on his Leaving Certificate.	traineeship medicine university scholarship.
111	Explains that he never did the Leaving Certificate. Explains that the traineeships were the brainchild of Colonel A.C. Fewtrell who was the chief civil engineer of the railways. Describes his policy that civil engineers should work in the field.	traineeships Colonel A.C. Fewtrell
121	Began the traineeship in 1934 at the Way and Works branch.	1934 Way and Works branch
124	Describes Colonel Fewtrell. Explains that at the beginning of 1935 Fewtrell made arrangements for him and a colleague Gordon Crandace to join the Commonwealth military services.	Colonel Fewtrell Military service Gordon Crandace

135	Explains why he and his friend became soldiers. Explains that during his training which was to last 10 years they were to learn all trades and explains the fields it would cover.	soldiers training
146	Believes that traineeships and cadetships are the same thing but just with different names.	traineeship cadetship
149	He was among the first group of trainees for the railways.	traineeship
151	Describes the physical attributes and manner of Fewtrell and explains that the man in charge of the trainees R.J. Boyd who was Bradfield's designing engineer for the city railway. Describes the effect of the Depression on the engineering areas of the railways.	Colonel Fewtrell R.J. Boyd depression
170	Describes his training at the railways including practical experience working on Transport House, experience in the design office where they helped design bridges for the Sutherland-Cronulla railway and the Sandy Hollow Railway. In 1937 did a year of surveying on the Sandy Hollow Railway where he worked for Charlie Young.	Training practical experience Transport House design Sutherland-Cronulla railway A.P. Bowden 1937 Sandy Hollow Railway Charlie Young
196	Describes the purpose of the Sandy Hollow Railway was to build a railway with a smaller gradient and also to create links for defence purposes	Sandy Hollow gradient defence



208	Describes what he learned in the survey section from the Chief Surveyor, Frank Wilson. Describes going out working with drainage gangs on the north coast during his holidays in 1936.	Survey Frank Wilson practical drainage 1936 design education
224	Describes the challenges in the Sandy Hollow railway. Explains the difficulties of getting the right grades and how Frank Wilson solved these problems.	Sandy Hollow Walla Walla Frank Wilson
233	Notes that there were only Parish maps available at the time and that they made their own maps.	maps
243	Explains how this was the only way to locate a railway line but that Frank Wilson did use an aerial photograph on a difficult area.	Frank Wilson aerial photographs
249	Notes that the tunnels were a challenge but he was not involved in these. Describes the girder bridges on the project and describes his involvement in the design of these. Describes the type of bridges that were designed under E.P. Bowden.	tunnels bridges design E.P. Bowden
266	Describes how inaccessible areas were reached by using the railway as far as it was built.	inaccessible areas
278	Explains that the line eventually linked the Gulgong-Lithgow branch to the northern line and describes the uses of the line	Gulgong Lithgow northern line.
288	Believes the line was about 150 miles. Recalls going to the opening of the line after his retirement in 1980. The line was hurried up to transport coal.	opening

296	The main purpose of the line was for easy crossing for goods across the great dividing range. Agrees that the railway helped a number of areas to develop.	purpose of Sandy Hollow line coal wheat ore
309	Explains that after the railways he went up to be assistant resident engineer on the Hawkesbury River Bridge for 6 months. Describes his experiences there. Also notes that A.C. Fewtrell asked him to prepare his paper on the bridge which took 2 or 3 months. Explains the time taken to build the bridge: 1937 to 1946	Hawkesbury River Bridge. A.C. Fewtrell 1937-1946

Tape: IEA SYD: FH55 Side B

TAPE COUNTER	SUBJECT	NAMES & KEYWORDS
004	Explains that after being in surveying for 12 months he went back to the drawing office under E.P. Bowden. Tells story of Fewtrell advising him to sit for an exam to get a commission in the army. Describes his progress in the army. Believes that he gained the most experience on railways in the army. Served in 1st field squadron RAE (field engineers). Recalls how he joined the railway construction and maintenance group to build a railway in France and that he was joined by Milton Wall and Gordon Crandace. Explains allocation in the army. Describes the process of going to France and that they arrived near the Suez Canal on 12/10/1940.	E. P. Bowden Fewtrell army First Field Squadron RAE France Railway Construction and Maintenance Group Milton Wall Gordon Crandace
038	Describes trip on the Largs Bay - a Dutch ship	Largs Bay

042	Explains why he ended up in the Middle East rather than France. Outlines some of the roles of engineers in the army.	Middle East France
049	Outlines that he arrived during the campaign in Libya.	Libya
051	Recalls that he was sent to Palestine. Describes the work that he did there and tells stories of the work and accidents that occurred. Describes further work building a railway on the eastern bank of the Suez canal and the purpose of this.	Palestine Farley railway Suez Canal
080	Describes the hostilities that occurred from German bombers, but notes that he was never bombed. Describes the bombing of Molaska in detail.	German Molaska
090	Did not think that his railway line would have been a target.	railway
091	Describes the climate of the Middle East area.	climate Middle East
096	Describes the Railway from Marn (?) to Naqbashatar and how the British engineers developed a road to Aqaba, and New Zealand engineers developed the port of Aqaba. Describes the reasons for this. Describes some of the history of the railway line.	Railway Naqbashatar Marn (?) Aqaba British New Zealand
113	Recalls getting lost in a blizzard on 8 January 1942 with temperature of -26 F. Tells story of how he got lost.	friendship blizzard
138	Tells how they were found again when they came to an encampment and describes the night that they spent at the encampment.	



148	Describes his next railway job in Lebanon where they made a line to Tripoli which was the last link in the line from Cairo to London. Explains why this link was necessary.	Lebanon Tripoli Cairo London
157	Explains that he was still a lieutenant at this stage. Explains what he learned while working with Farley and the routine of his day. Tells story of a rail accident.	Lieutenant Farley accident
172	Explains that in general the railways were safe and that he went back and rectified the problem that caused the accident.	accident safety
175	Describes the workforce, mostly Arab, who were supplied by the British labour section of the army. Describes how the sheikhs were paid to bring men in. Describes the workers.	Arab British labour section sheikhs
190	Tells story of being in the Trans-Jordan and how he was passed over for a promotion.	Trans-Jordan promotion
200	Tells story of how he and a number of others who had been passed over complained and that he eventually got the position as Captain.	promotion Captain
215	Returned to Australia in 1943 as second in command of the Second Company. Went out to Wagga, reformed and refitted. Recalls that Major Walpole flew up to the Northern Territory. Describes the route he went to take his company up there. Describes the equipment they had.	1943 Wagga Major Walpole Northern Territory



226	Worked building the North-South Road from Alice Springs to Darwin. Explains that no Americans worked on that road and that it was constructed by the Civil Construction Committee, (the CCC) which recruited civilian staff or any army labour they could get. Worked there from October 1943 to January 1944. Then went to a senior officers' training course which he passed. Returned to Northern Territory, then went to Kapooka to reform another battalion. Refitted and trained battalion in Atherton tablelands before going to Morotai and Borneo.	North South Road Alice Springs Darwin Civil Construction Committee 1943 1944 training Northern Territory Kapooka Atherton Tablelands Morotai Borneo
248	Tells story of Gordon Crandace who invited an American entertainer to the camp for a beer.	Gordon Crandace
261	Describes the weather in the Northern Territory.	Northern Territory
266	Explains the background to going to Borneo due to Gen. Blainey's refusal to serve under Macarthur. Explains the reasons for going to Borneo.	defence Borneo oil
282	Explains that half of the company went to build roads and that he flew in to see how they were getting on.	
289	Explains that he built both roads and railways. Describes the training he had in building roads.	roads railways
299	Describes the conditions in Tarokan and Morotai. The roads were made of coral and explains how this was quarried.	Tarokan Morotai conditions
322	Explains that he didn't see any action there but did see Japanese soldiers who were brought into prison camps. Tells story of a ship he saw come in with Japanese and Sikh prisoners on board.	Japanese Prison camps

Tape: IEA SYD: FH56 Side A
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005	Returned home from Moratai on the 'Duntroon'. After 3 weeks leave and medical clearance, returned to work, saw A.C. Fewtrell and requested that he be located close to Sydney in order to finish his degree. He was sent to work on the Hawkesbury bridge. Tells in detail how he travelled to lectures after work and describes the routine of his day.	post-war Moratai Duntroon A.C. Fewtrell qualifications Hawkesbury education
049	Describes his job at the Hawkesbury.	Hawkesbury
051	Explains in detail why the old bridge, built in 1886 was no longer serviceable due to shortage of concrete during construction.	Hawkesbury 1886
066	Describes the biggest challenge of the project as sinking the foundations which were very deep. Describes the casements and techniques used in the bridge construction.	Hawkesbury Bridge foundations casements construction techniques
082	Describes the testing of the bridge with locomotives.	locomotives testing
087	Explains that construction on the bridge began in about 1936 and was completed in 1946. Construction was slowed during the war. Also notes that it was constructed wholly by the railways.	1936 1946 railway contractors
098	Tells story of how he met his wife at Cronulla Golf Course.	wife Cronulla Golf Course

113	Explains that he never played golf in his life nor bowls and never will.	golf bowls
115	Describes the courtship of seeing each other on weekends due to his heavy schedule. They decided to get married in Easter 1946 and took a honeymoon in Katoomba during which time he also had to study	courtship wedding 1946 honeymoon Katoomba study
123	Went to Dubbo as district engineer in August 1947 with wife and first young daughter Pat. Describes his job there where the techniques were backward and explains how he improved things, especially with mechanical equipment. Was asked to do a job in Coffs Harbour but the accommodation offered was a tent. He refused to go and so had to go and see A.C. Fewtrell. There he found out that he was to be posted instead to Sydenham to take over Number 1 track districts. Worked there under John Degotardi. Describes Degotardi. Describes conditions in the railway at this time. Explains how he and Alex Coote lobbied for a school to train railway gangs. Describes how they set up the training.	1947 Dubbo Coffs Harbour Fewtrell Sydenham number 1 track district Degotardi. Alex Coote training
171	Explains number 1 track district and that his job was to ensure the tracks were maintained.	number 1 track district
181	Tells story of Bernie Willingale, a unionist.	Bernie Willingale
186	Explains that he and his family lived with his mother at Sutherland when they returned to Sydney	Sutherland family
191	Explains that he became an Engineer Class 3 and Divisional Engineer, Dubbo. Describes the area that this covered. His job was to maintain the tracks.	promotion.



204	Describes the condition of the tracks in this area. Explains that the main part of the job was putting in more sleepers, particularly hard wood.	track condition.
220	Explains how he was involved in introducing concrete sleepers later on.	sleepers
231	Describes other responsibilities of the job and the changes he introduced.	responsibilities
237	Explains that he had difficulty introducing new ideas when he was trying to introduce underground pipes.	challenges
249	Also lobbied to get mechanical equipment to be used, rather than manual labour	mechanical equipment.
258	Explains that in 1957 at Sydenham he was engineer in charge of number 1 track district.	1957 Sydenham
266	Explains how the army began to recruit reserves trained in engineering to be the forerunner of a construction group. Explains that he was seconded into this so that they could be called up and relieved of their civilian duties in case of war.	1954 army
289	Explains the medal he received.	medal
294	Explains that he returned to Dubbo. Re-iterates the training system that he set up in Sydenham and also his work in ensuring that engineers were also being trained. Describes the live-in school that they started up which was opened up by the Chief Engineer.	Dubbo Sydenham training education



Tape: IEA SYD: FH56	Side B
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TAPE COUNTER	SUBJECT	NAMES & KEYWORDS
004	Explains that he was District Engineer in Dubbo for 4 years and then went to Goulburn which was a more important track district.	Dubbo Goulburn
007	Outlines the responsibilities of this job in Goulburn. Tells story of going down there with the Inspecting Engineer, Hawkins and the kind of work that he did on track maintenance.	Goulburn Hawkins
011	Tells story of a ganger at Gunning who found a fractured rail. Describes how the rail detector car was operated from head office. Notes that Ted Bennett who had been a trainee engineer invented the detection system. Describes the problems with the rail detection track and his solution to them.	Gunning rail detector car Ted Bennett
052	Tells story of a derailment at Bundanoon.	Bundanoon
060	Explains track inspection systems and training staff in this system. Tells story of another maintenance difficulty in Narromine.	track inspection Narromine supervision
092	Outlines how he arranged for spraying to be done by trucks rather than by hand when he was in Goulburn. Tells story of how this freed up workers time to put in sleepers and set a quota for the gangs and the changes he made in the maintenance of tracks.	spraying trucks Goulburn maintenance
119	Returned to Sydney where he was Construction Engineer for the metropolitan area.	Sydney construction engineer

123	Explains that this job mostly involved buildings. Outlines the jobs including 4 platforms at Sydney station and Diesel Depot at Temora, railhouses at Enfield, tunnels for water pipes.	Sydney Temora Enfield
133	Explains that the metropolitan system was in poor repair since the war.	metropolitan
139	Outlines the difficulties in getting the surface of the rails up to standard. Explains career path to being Engineer of Track Construction where he was sorting out ways of mechanising trackwork and providing Fairmonts track cars to transport the workers.	track construction Fairmonts Mechanising
161	Explains that he travelled overseas to study track maintenance equipment in England, France, Germany, Austria and USA.	travel
170	Describes the methods that he examined on his overseas trip.	travel
177	Notes that Germany and France were way ahead of Australia in terms of tamping. Describes other railways that were ahead of Australia.	Germany France
183	Describes how he wrote papers upon his return to get bigger machines that could do more tamping per hour. Explains the system of tamping. Describes some corruption regarding quarry contracts for ballast. Tells story of another friend called Gordon who helped him to overcome this corruption so that they could get contract ballast. Relates how there were difficulties in getting people to work painting the iron bridges which led to getting contractors to work in various areas.	tamping ballast corruption contractors

226	Tells story of a derailment of the Daylight Express in Wagga. Explains that he worked on fixing the problem and reported to Hawkins about the problem.	derailment Wagga Hawking
247	Describes how some districts were not up to standard in maintenance. Describes in details how proper re-railing was more effective. Also tried to introduce recycling rails into the railway maintenance.	re-railing recycling
287	Believes that his biggest innovations in the railways were in training and in changing maintenance practice.	innovations
296	In 1966 became Assistant Chief Civil Engineer, Maintenance. This job also involved supervising training from Norman Webster. He and Alec Coote set up a course for students to get field experience. Explains that he took a very hands on role in this	1966 Chief Civil Engineer Maintenance training education

Tape: IEA SYD: FH57      Side A

TAPE COUNTER	SUBJECT	NAMES & KEYWORDS
005	Describes position in 1968 as Deputy Chief Civil Engineer and explains that when he became Chief Engineer he got rid of this position.	1968 Deputy Chief Civil Engineer



014	Explains that at this time the Eastern Suburbs railway was being constructed. Explains that there was a lot of contract work and that T.J. Smith who was in charge was difficult. Tells story of the Woolloomooloo viaducts which was contracted to the Snowy Mountain Authority and some of the difficulties of this.	Eastern Suburbs railway T.J. Smith Woolloomooloo
044	Became General Manager, Way and Works in 1973. Explains that when McCusker went they sought a new Commissioner worldwide. Outlines the new commissioners, including Philip Shirley and explains that the Institution of Engineers lobbied for getting an engineer on the Commission. Explains that Archer, a signals engineer was appointed but died within 3 weeks. Chief Civil Engineer Bill Waite was recommended for the job, but refused. Explains how the title of Chief Civil Engineer was changed to Manager, Way and Works. Explains how due to Bill Waite's refusal he became appointed as Commissioner. Thanks the Institution of Engineers for lobbying for this.	Manager Way & Works Commissioners Philip Shirley Institute of Engineers Archer Bill Waite
086	Explains that once he became a Commissioner he was put in charge of buses and ferries even though he was the only person who knew about railways. Also he was put in charge of personnel. This was the Commission of Public Transport which amalgamated Rail, Bus and Ferries. Explains that eventually he was put in charge of railways.	Commissioner buses ferries Commission of Public Transport
103	Notes that he was to be on the Commission until 12 October 1980, however they brought in an act on 30 May 1980 to disband the Commission and he resigned before it came to that.	Commission 1980
112	Explains why he resigned instead of waiting to be posted to another position.	resignation retirement.



120	Explains that he retired 12 weeks before he turned 65.	retirement.
123	Describes his positions up until he became Commissioner as a very rewarding job.	Commissioner politics
139	Describes his retirement for the last 20 years as helping his wife, reading books and looking after his share portfolio.	retirement
149	Explains that he is still a fellow of the Institution of Engineers but is not involved in any of the railways or transport, but does attend a conference in town every year.	Institute of Engineers
158	Explains how his daughter, a lawyer, advised him not to do anything extra in his retirement. Explains that he doesn't owe anything.	
175	Describes his children and grandchildren.	
188	Gives his opinion on fellow commissioners. Recalls Philip Shirley and tells story of Shirley complaining about the walls on Wynyard Stations. Tells story of some washaways in Narrabri that were repaired very quickly. Recalls a course in management that he did where there was a lecture on finance and relates this to Shirley's style of management.	
223	Re-iterates that his mark on the Railways was education and training for engineers and the introduction of modern machinery and contract workers. Also brought in the electrification of Gosford to Newcastle line. Tells story about changing the system for purchase of locomotives. Tells story of electrification of Gosford to Newcastle line.	education training machinery Gosford Newcastle electrification corruption

280	Outlines philosophy of not counting victories, only common sense. Also cannot recall mistakes but tells story of how he believes that they're not here to take risks but rather to make the track safe which he learned from Degotardi.	philosophy Degotardi
299	Notes that he hopes that some of the things he introduced are still in the railways.	

Engineering Heritage Committee  
THE INSTITUTION OF ENGINEERS, AUSTRALIA  
SYDNEY DIVISION

ORAL HISTORY PROGRAM: RELEASE DOCUMENT

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SIGNED: R Gordon

DATE: 2-3-00

INTERVIEWER: FRANK HEIMAN'S (please print)

SIGNED: [Signature]

TAPE NUMBERS: IEA SYD: FH55-57

SPECIAL CONDITIONS (if any):

none